

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### Sub-Zero Freezer Co Inc

#### Arizona Manufacturing Extension Partnership

#### Sub-Zero Warms up to Lean

##### Client Profile:

Sub-Zero Freezer Company, Inc., has pioneered the manufacture of quality refrigeration products since its founding in 1943. Sub-Zero refrigerators, freezers and wine storage units are the definitive kitchen components. Made by hand, it is the only brand with dual refrigeration. With the acquisition of the Wolf line in 2000, the company now provides complete luxury lines of appliances for the upscale customer. Sub-Zero's Phoenix, Arizona, facility is 160,000 square feet with approximately 250 employees working two shifts.

##### Situation:

Sub-Zero is number one in their market and keenly aware that they must continually improve in order to maintain that status. The corporate offices and three manufacturing sites are in Madison and Fitchburg, Wisconsin. The Madison plant made great strides implementing Lean, and the Arizona facility was anxious to mirror that success. However, its current layout was an impediment for effective flow. The facility was eager to increase throughput by changing the existing layout, as well as instituting cell manufacturing. Their management team had developed a preliminary layout design and then contacted the Arizona Manufacturing Extension Partnership (Arizona MEP), a NIST MEP network affiliate, for assistance.

##### Solution:

Arizona MEP trained 20 key staff people in Lean awareness. After successfully completing the awareness course, four managers attended a Value Stream Management Systems event. All attendees walked the full facility collecting baseline metrics in order to create the current state value stream map. The hands-on collection of data proved to be a powerful tool. The attendees were able to readily spot the capacity bottlenecks which allowed them to refine the layout to make better and more efficient material flow. The Arizona MEP team facilitated the Sub-Zero management team through the Future State Map. Based on the output, Sub-Zero was able to make significant improvements to the preliminary layout which will ultimately save them time and money.

##### Results:

- \* Improved plant layout design.
- \* Reduced lead time by 54 percent, from 13 minutes to 4.5 minutes.
- \* Doubled plant capacity.
- \* Reduced Takt Time (the time that a completed product is finished) by 50 percent, from 13.8 minutes to 6.9 minutes.

##### Testimonial:

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"Although the Sub-Zero Phoenix facility is early in the lean journey, the resources and training by Arizona MEP are allowing the people to build tools, awareness and synergy towards making a World Class facility. The training and practice of Workplace Organization, 5S implementation, Value Stream Mapping and effective Kaizen events will drive the business to not only deliver a substantial cost performance, but add value to the customer by more reliable and consistent production."

Ron Jones, Plant manager